

Amendments to the Claims

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

Claims 1 - 3. (Canceled)

4. (currently amended) A reproduction apparatus for reproducing information from an information storage medium, wherein the information storage medium ~~comprising~~ comprises:
- a recording information area; and
 - ✓ an aggregate attribute information area, wherein the recording information area comprises:
 - a partial recording information area where one or more partial recording information objects ~~is~~ are recorded, each of the partial recording information objects including one or more unit audio information objects which ~~is~~ are logically defined; and
 - a control data area where control data including partial recording information attribute information is recorded ~~as control data~~, the control data corresponding to each of the partial recording information objects, the partial recording information attribute information indicating attributes of the corresponding partial recording information objects,
- and wherein one or more unit audio information attribute information pieces ~~is~~ are collectively recorded in the aggregate attribute information area, the one or more unit audio information attribute information pieces corresponding (to each) of the unit audio information objects and indicating attributes of the corresponding unit audio information objects respectively, and wherein the aggregate attribute information area is formed at a position on the information storage medium such that the one or more unit audio

1
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information attribute information pieces can be detected prior to the one or more partial recording information objects and the control data, and the reproduction apparatus comprises:

a reading unit ~~for reading~~which reads information from the information storage medium;

a storage unit ~~for storing~~which stores the aggregate attribute information read by the reading unit;

an input unit ~~for receiving~~which receives, from a user, a reproduction instruction designating ~~a plurality of the~~ unit audio information objects to be reproduced successively; and

a reproduction unit ~~for setting~~which sets the attribute for the reproduction based on the aggregate attribute information stored in the storage unit and ~~for reproducing~~reproduces the unit audio information objects designated by the user in accordance with the attribute set,

wherein said reproduction unit comprises:

an obtaining unit ~~for obtaining~~which obtains the attributes corresponding to ~~each of the plurality of~~ unit audio information objects designated by the user from the aggregate attribute information stored in the storage unit;

a determining unit ~~for determining~~which determines whether or not the obtained attributes of the unit audio information objects to be successively reproduced are identical; and

an attribute change unit ~~for starting~~which starts an attribute setting of the unit audio information object to be reproduced next immediately after the reproduction of the unit audio information object currently reproduced, if the determining unit determines that the attributes are different.

5. (currently amended) The reproduction apparatus according to claim 4, wherein the reproduction unit further comprises a search unit ~~for transferring~~which transfers the reading unit to a recording position on the information storage medium of the unit audio information object to be reproduced next immediately after the reproduction of the unit audio information object currently reproduced, and ~~for allowing~~allows the reproduction

unit to start reproduction of the unit audio information object to be reproduced next after a predetermined waiting time has passed from the start of the transfer of the reading unit.

6. (previously presented) The reproduction apparatus according to claim 5, wherein the waiting time is longer than a time required to change the set attribute by the attribute change unit.
7. (currently amended) A reproduction apparatus for reproducing information from an information storage medium, wherein the information storage medium ~~comprising~~comprises:
a recording information area; and
an aggregate attribute information area,
wherein the recording information area comprises:
a partial recording information area where one or more partial recording information objects ~~is-are~~ recorded, each of the partial recording information objects including one or more unit audio information objects which ~~is-are~~ logically defined; and
a control data area where control data including partial recording information attribute information is recorded ~~as control data~~, the control data corresponding to each of the partial recording information objects, the partial recording information attribute information indicating attributes of the corresponding partial recording information objects,
and wherein one or more unit audio information attribute information pieces ~~is-are~~ collectively recorded in the aggregate attribute information area, the one or more unit audio information attribute information pieces corresponding to each of the unit audio information objects and indicating attributes of the corresponding unit audio information objects respectively, and wherein the aggregate attribute information area is formed at a position on the information storage medium such that the one or more unit audio information attribute information pieces can be detected prior to the one or more partial recording information objects and the control data,

and the reproduction apparatus comprises:

a reading unit ~~for reading~~ which reads information from the information storage medium;

[a table producing unit ~~for obtaining~~ which obtains the aggregate attribute information corresponding to the unit audio information objects recorded on the information storage medium from the reading unit and ~~for producing~~ produces an aggregate attribute information table;

a storage unit ~~for storing~~ which stores the aggregate attribute information table produced by the table producing unit;

an input unit ~~for receiving~~ which receives, from a user, a reproduction instruction designating a plurality of the unit audio information objects to be reproduced successively; and

a reproduction unit ~~for setting~~ which sets the attribute for the reproduction based on the aggregate attribute information table stored in the storage unit and ~~for reproducing~~ reproduces the unit audio information objects designated by the user in accordance with the attribute set, wherein said reproduction unit comprises:

an obtaining unit ~~for obtaining~~ which obtains the attributes corresponding to each of the ~~plurality of~~ unit audio information objects designated by the user from the aggregate attribute information table stored in the storage unit;

a determining unit ~~for determining~~ which determines whether or not the obtained attributes of the unit audio information objects to be successively reproduced are identical; and

an attribute change unit ~~for starting~~ which starts an attribute setting of the unit audio information object to be reproduced next immediately after the reproduction of the unit audio information object currently reproduced, if the determining unit determines that the attributes are different.

8. (currently amended) The reproduction apparatus according to claim 7, wherein the reproduction unit further comprises a search unit ~~for transferring~~ which transfers the reading unit to a recording position on the information storage medium of the unit audio information object to be reproduced next immediately after the reproduction of the unit

audio information object currently reproduced, and ~~for allowing~~ allows the reproduction unit to start reproduction of the unit audio information object to be reproduced next after a predetermined waiting time has passed from the start of the transfer of the reading unit.

9. (previously presented) The reproduction apparatus according to claim 8, wherein the waiting time is longer than a time required to change the set attribute by the attribute change unit.
10. (currently amended) A reproduction method for reproducing information from an information storage medium, wherein the information storage medium comprises:
a recording information area; and
an aggregate attribute information area,
wherein the recording information area comprises:
a partial recording information area where one or more partial recording information objects ~~is-are~~ recorded, each of the partial recording information objects including one or more unit audio information objects which ~~is-are~~ logically defined; and
a control data area where control data including partial recording information attribute information is recorded ~~as control data~~, the control data corresponding to each of the partial recording information objects, the partial recording information attribute information indicating attributes of the corresponding partial recording information objects,
and wherein one or more unit audio information attribute information pieces ~~is-are~~ collectively recorded in the aggregate attribute information area, the one or more unit audio information attribute information pieces ~~corresponding to each of the~~ unit audio information objects and indicating attributes of the corresponding unit audio information objects respectively, and wherein the aggregate attribute information area is formed at a position on the information storage medium such that the one or more unit audio information attribute information pieces can be

6

detected prior to the one or more partial recording information objects and the control data,

and the reproduction method comprises:

reading information from the information storage medium;

storing the aggregate attribute information read in the reading process in a storage unit;

receiving, from a user, a reproduction instruction designating the unit audio information objects to be reproduced successively;

setting the attribute for the reproduction based on the aggregate attribute information stored in the storage unit; and

reproducing the unit audio information objects designated by the user in accordance with the attribute set,

wherein ~~said reproducing step~~ reproducing the unit audio information objects comprises:

obtaining the attributes corresponding to the unit audio information objects designated by the user from the aggregate attribute information stored in the storage unit;

determining whether or not the obtained attributes of the unit audio information objects to be successively reproduced are identical; and

starting an attribute setting of the unit audio information object to be reproduced next immediately after the reproduction of the unit audio information object currently reproduced, if it is determined ~~in the determining step~~ that the attributes are different.

11. (currently amended) The reproduction method according to claim 10, wherein the reproduction method further comprises a search process, the search process comprising: transferring an information reading position to a recording position on the information storage medium of the unit audio information object to be reproduced next immediately after the reproduction of the unit audio information object currently reproduced; and

starting reproduction of the unit audio information object to be reproduced next after a predetermined waiting time has passed from the start of the transfer of the information reading position.

12. (previously presented) The reproduction method according to claim 11, wherein the waiting time is longer than a time required to change the set attribute.

13. (currently amended) A reproduction method for reproducing information from an information storage medium, wherein the information storage medium comprises:

a recording information area; and

an aggregate attribute information area,

wherein the recording information area comprises:

a partial recording information area where one or more partial recording information objects ~~is-are~~ recorded, each of the partial recording information objects including one or more unit audio information objects which ~~is-are~~ logically defined; and

a control data area where control data including partial recording information attribute information is recorded ~~as control data~~, the control data corresponding to each of the partial recording information objects, the partial recording information attribute information indicating attributes of the corresponding partial recording information objects,

and wherein one or more unit audio information attribute information pieces ~~is-are~~ collectively recorded in the aggregate attribute information area, the one or more unit audio information attribute information pieces corresponding to each of the unit audio information objects and indicating attributes of the corresponding unit audio information objects respectively, and wherein the aggregate attribute information area is formed at a position on the information storage medium such that the one or more unit audio information attribute information pieces can be detected prior to the one or more partial recording information objects and the control data,

and the reproduction method comprises:
reading information from the information storage medium;
obtaining the aggregate attribute information corresponding to the unit audio information objects recorded on the information storage medium in the reading process to produce an aggregate attribute information table;
storing the produced aggregate attribute information table into a storage unit;
receiving, from a user, a reproduction instruction designating a plurality of the unit audio information objects to be reproduced successively;
setting the attribute for the reproduction based on the aggregate attribute information table stored in the storage unit; and
reproducing the unit audio information objects designated by the user in accordance with the attribute set,
wherein ~~said reproducing step~~ reproducing the unit audio information objects comprises:
obtaining the attributes corresponding to ~~each of the plurality of the~~ unit audio information objects designated by the user from the obtained aggregate attribute information table stored in the storage unit;
determining whether or not the attributes of the unit audio information objects to be successively reproduced are identical; and
starting an attribute setting of the unit audio information object to be reproduced next immediately after the reproduction of the unit audio information object currently reproduced, if it is determined ~~in the determining step~~ that the attributes are different.

14. (currently amended) The reproduction method according to claim 13, wherein the reproduction method further comprises a search process, wherein the search process ~~comprising~~ comprises:
transferring an information reading position to a recording position on the information storage medium of the unit audio information object to be reproduced next immediately after the reproduction of the unit audio information object currently reproduced; and

starting reproduction of the unit audio information object to be reproduced next after a predetermined waiting time has passed from the start of the transfer of the information reading position.

15. (previously presented) The reproduction method according to claim 14, wherein the waiting time is longer than a time required to change the set attribute.

Claims 16 - 43. (canceled)

44. (currently amended) An information storage medium comprising:
a recording information area and
an aggregate attribute information area,
wherein the recording information area comprises:
a partial recording information area where one or more partial recording information-is objects are recorded, each of the partial recording information objects including one or more unit audio information objects which is-are logically defined; and
a control data area where control data including partial recording information attribute information is recorded, the control data corresponding to each of the partial recording information objects, the partial recording information attribute information indicating attributes of the corresponding partial recording information objects,
and wherein one or more unit audio information attribute information is-pieces are collectively recorded in the aggregate attribute information area, the one or more unit audio information attribute information pieces corresponding to each of the unit audio information objects and indicating attributes of the corresponding unit audio information objects respectively, and wherein the aggregate attribute information area is formed at a position on the information storage medium such that the one or more unit audio information attribute information pieces can be detected prior to the one or more partial recording information objects and the control data.

45. (previously presented) The information storage medium according to claim 44, wherein the aggregate attribute information area is formed within a management information area where management information is recorded, the management information being information to manage information recorded on the information storage medium.
46. (currently amended) The information storage medium according to claim 44, wherein ~~the~~ at least one unit audio information attribute information piece comprises:
information indicating a sampling frequency of ~~the~~ at least one unit audio information object; and
a quantization bit number of the at least one unit audio information object corresponding to the at least one unit audio information attribute information piece.
47. (currently amended) The information storage medium according to claim 45, wherein ~~the~~ at least one unit audio information attribute information piece comprises:
information indicating a sampling frequency of ~~the~~ at least one unit audio information object; and
a quantization bit number of the at least one unit audio information object corresponding to the at least one unit audio information attribute information piece.
48. (currently amended) The information storage medium according to claim 44, wherein the partial recording information attribute information comprises:
a number of ~~the~~ at least one unit audio information object;
playback time of the at least one unit audio information object;
a start address of the at least one unit audio information object on the information storage medium;
an end address of the at least one unit audio information on the information storage medium; and
~~the~~ a corresponding unit audio information attribute information piece.

49. (currently amended) The information storage medium according to claim 45, wherein the partial recording information attribute information comprises:
a number of ~~the~~ at least one unit audio information object;
playback time of the at least one unit audio information object;
a start address of the at least one unit audio information object on the information storage medium;
an end address of the at least one unit audio information object on the information storage medium; and
~~the~~ a corresponding unit audio information attribute information piece.
50. (currently amended) The information storage medium according to claim 46, wherein the partial recording information attribute information comprises:
a number of ~~the~~ at least one unit audio information object;
playback time of the at least one unit audio information object;
a start address of the at least one unit audio information object on the information storage medium;
an end address of the at least one unit audio information on the information storage medium; and
~~the~~ a corresponding unit audio information attribute information piece.
51. (currently amended) The information storage medium according to claim 47, wherein the partial recording information attribute information comprises:
a number of ~~the~~ at least one unit audio information object;
playback time of the at least one unit audio information object;
a start address of the at least one unit audio information object on the information storage medium;
an end address of the at least one unit audio information object on the information storage medium; and
~~the~~ a corresponding unit audio information attribute information piece.

52. (currently amended) A reproduction apparatus for reproducing information from an information storage medium, wherein said information storage medium comprises:
a recording information area; and
an aggregate attribute information area,
wherein the recording information area comprises:
a partial recording information area where one or more partial recording information ~~is~~ objects are recorded, each of the partial recording information objects including one or more unit audio information objects which ~~is~~ are logically defined; and
a control data area where control data including partial recording information attribute information is recorded ~~as control data~~, the control data corresponding to each of the partial recording information objects, the partial recording information attribute information indicating attributes of the corresponding partial recording information objects, ~~and~~
and wherein one or more unit audio information attribute information is ~~pieces are~~ collectively recorded in the aggregate attribute information area, the one or more unit audio information attribute information pieces corresponding to each of the unit audio information objects and indicating attributes of the corresponding unit audio information objects respectively, and wherein the aggregate attribute information area is formed at a position on the information storage medium such that the one or more unit audio information attribute information pieces can be detected prior to the one or more partial recording information objects and the control data,
and the reproduction apparatus comprising:
a detecting unit ~~for detecting which detects~~ the one or more unit audio information attribute information pieces from the aggregate attribute information area; and
a reproducing unit ~~for reproducing which reproduces~~ the one or more unit audio information objects based on the detected one or more unit audio information attribute information pieces.

53. (previously presented) The reproduction apparatus according to claim 52, wherein the aggregate attribute information area is formed within a management information area where management information is recorded, the management information being information to manage information recorded on the information storage medium.
54. (currently amended) The reproduction apparatus according to claim 52, wherein ~~the~~ at least one unit audio information attribute information piece comprises:
information indicating a sampling frequency of ~~the~~ at least one unit audio information object and
a quantization bit number of the at least one unit audio information object corresponding to the at least one unit audio information attribute information piece.
55. (currently amended) The reproduction apparatus according to claim 52, wherein ~~the~~ at least one unit audio information attribute information piece comprises:
information indicating a sampling frequency of ~~the~~ at least one unit audio information object; and
a quantization bit number of the at least one unit audio information object corresponding to the at least one unit audio information attribute information piece,
and wherein the aggregate attribute information area is formed within a management information area where management information is recorded, the management information being information to manage information recorded on the information storage medium.
56. (currently amended) The reproduction apparatus according to claim 52, wherein the partial recording information attribute information comprises:
a number of ~~the~~ at least one unit audio information object;
playback time of the at least one unit audio information object;
a start address of the at least one unit audio information object on the information storage medium;

an end address of the at least one unit audio information object on the information storage medium; and
~~the a corresponding~~ unit audio information attribute information piece.

57. (currently amended) The reproduction apparatus according to claim 52, wherein the partial recording information attribute information comprises:
a number of ~~the~~ at least one unit audio information object;
playback time of the at least one unit audio information object;
a start address of the at least one unit audio information object on the information storage medium;
an end address of the at least one unit audio information object on the information storage medium; and
~~the a corresponding~~ unit audio information attribute information piece,
and wherein the aggregate attribute information area is formed within a management information area where management information is recorded, the management information being information to manage information recorded on the information storage medium.

58. (currently amended) The reproduction apparatus according to claim 52, wherein the partial recording information attribute information comprises:
a number of ~~the~~ at least one unit audio information object;
playback time of the at least one unit audio information object;
a start address of the at least one unit audio information object on the information storage medium;
an end address of the at least one unit audio information object on the information storage medium; and
~~the a corresponding~~ unit audio information attribute information piece,
and wherein the corresponding unit audio information attribute information piece comprises:

information indicating a sampling frequency of the at least one unit audio information object; and
a quantization bit number of the at least one unit audio information object corresponding to the corresponding unit audio information attribute information piece.

59. (currently amended) The reproduction apparatus according to claim 52, wherein the partial recording information attribute information comprises:
- a number of ~~the~~ at least one unit audio information object;
 - playback time of the at least one unit audio information object;
 - a start address of the at least one unit audio information object on the information storage medium;
 - an end address of the at least one unit audio information object on the information storage medium; and
 - ~~the~~ a corresponding unit audio information attribute information piece,
- and wherein the corresponding unit audio information attribute information piece comprises:
- information indicating a sampling frequency of the at least one unit audio information object; and
 - a quantization bit number of the at least one unit audio information object corresponding to the corresponding unit audio information attribute information piece,
- and wherein the aggregate attribute information area is formed within a management information area where management information is recorded, the management information being information to manage information recorded on the information storage medium.
60. (currently amended) A reproduction method for reproducing information from an information storage medium, wherein said information storage medium comprises:
- a recording information area; and

an aggregate attribute information area,

wherein the recording information area comprises:

a partial recording information area where one or more partial recording information ~~is~~ objects are recorded, each of the partial recording information objects including one or more unit audio information objects which ~~is~~ are logically defined; and

a control data area where control data including partial recording information attribute information is recorded ~~as control data~~, wherein the control data corresponds to each of the partial recording information objects and the partial recording information attribute information indicating attributes of the partial recording information objects,

and wherein one or more unit audio information attribute information ~~is~~ pieces are collectively recorded in the aggregate attribute information area, the one or more unit audio information attribute information pieces corresponding to each of the unit audio information objects and indicating attributes of the corresponding unit audio information objects respectively, and wherein the aggregate attribute information area is formed at a position on the information storage medium such that the one or more unit audio information attribute information pieces can be detected prior to the one or more partial recording information objects and the control data, and the reproduction method comprising:

detecting the one or more unit audio information attribute information pieces from the aggregate attribute information area; and

reproducing the one or more unit audio information objects based on the detected one or more unit audio information attribute information pieces.

61. (previously presented) The reproduction method according to claim 60, wherein the aggregate attribute information area is formed within a management information area where management information is recorded, the management information being information to manage information recorded on the information storage medium.

62. (currently amended) The reproduction method according to claim 60, wherein ~~the~~ at least one unit audio information attribute information piece comprises:
information indicating a sampling frequency of ~~the~~ at least one unit audio information object; and
a quantization bit number of the at least one unit audio information object corresponding to the at least one unit audio information attribute information piece.
63. (currently amended) The reproduction method according to claim 60, wherein ~~the~~ at least one unit audio information attribute information piece comprises:
information indicating a sampling frequency of ~~the~~ at least one unit audio information object; and
a quantization bit number of the at least one unit audio information object corresponding to the at least one unit audio information attribute information piece,
and wherein the aggregate attribute information area is formed within a management information area where management information is recorded, the management information being information to manage information recorded on the information storage medium.
64. (currently amended) The reproduction method according to claim 60, wherein the partial recording information attribute information comprises:
a number of ~~the~~ at least one unit audio information object;
playback time of the at least one unit audio information object;
a start address of the at least one unit audio information object on the information storage medium;
an end address of the at least one unit audio information on the information storage medium; and
~~the~~ a corresponding unit audio information attribute information piece.

65. (currently amended) The reproduction method according to claim 60, wherein the partial recording information attribute information comprises:
- a number of ~~the~~ at least one unit audio information object;
 - playback time of the at least one unit audio information object;
 - a start address of the at least one unit audio information object on the information storage medium;
 - an end address of the at least one unit audio information object on the information storage medium; and
 - ~~the~~ a corresponding unit audio information attribute information piece,
- and wherein the aggregate attribute information area is formed within a management information area where management information is recorded, the management information being information to manage information recorded on the information storage medium.
66. (currently amended) The reproduction method according to claim 60, wherein the partial recording information attribute information comprises:
- a number of ~~the~~ at least one unit audio information object;
 - playback time of the at least one unit audio information object;
 - a start address of the at least one unit audio information object on the information storage medium;
 - an end address of the at least one unit audio information object on the information storage medium, and
 - ~~the~~ a corresponding unit audio information attribute information piece,
- and wherein the corresponding unit audio information attribute information piece comprises:
- information indicating a sampling frequency of the at least one unit audio information object; and
 - a quantization bit number of the at least one unit audio information object corresponding to the corresponding unit audio information attribute information piece.

67. (currently amended) The reproduction method according to claim 60, wherein the partial recording information attribute information comprises:

a number of ~~the~~ at least one unit audio information object;

playback time of the at least one unit audio information object;

a start address of the at least one unit audio information object on the information storage medium;

an end address of the at least one unit audio information object on the information storage medium; and

~~the~~ a corresponding unit audio information attribute information piece,

and wherein the corresponding unit audio information attribute information piece comprises:

information indicating a sampling frequency of the at least one unit audio information object; and

a quantization bit number of the at least one unit audio information object corresponding to the corresponding unit audio information attribute information piece,

and wherein the aggregate attribute information area is formed within a management information area where management information is recorded, the management information being information to manage information recorded on the information storage medium.

68. (currently amended) An information recording apparatus comprising:

a first generating device ~~for generating~~ which generates recording information comprising one or more partial recording information objects, each of the partial recording information objects including one or more unit audio information objects which is are logically defined;

a second generating device ~~for generating~~ which generates additional information comprising control data and unit audio information attribute information pieces, the control data corresponding to each of the partial recording information objects

and including partial recording information attribute information indicating attributes of the corresponding partial recording information objects, and the unit audio information attribute information pieces indicating attributes of the one or more unit audio information objects respectively; and
a recording device ~~for recording~~which records the recording information and the additional information into an information storage medium,
wherein the unit audio information attribute information pieces ~~is~~ are recorded at a position on the information storage medium such that the unit audio information attribute information pieces can be detected prior to the one or more partial recording information objects and the control data.

69. (currently amended) An information recording method comprising:
a first generating process for generating recording information comprising one or more partial recording information objects including one or more unit audio information objects which ~~is~~ are logically defined;
a second generating process for generating additional information comprising control data and unit audio information attribute information pieces, the control data corresponding to each of the partial recording information objects and including partial recording information attribute information indicating attributes of the one or more partial recording information objects, and the unit audio information attribute information pieces indicating attributes of the one or more unit audio information objects respectively; and
a recording process for recording the recording information and the additional information into an information storage medium,
wherein the unit audio information attribute information ~~is~~ pieces are recorded at a position on the information storage medium such that the unit audio information attribute information pieces can be detected prior to the one or more partial recording information objects and the control data.